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A new species of the leafhopper genus *Diomma* Motschulsky (Hemiptera, Cidadellidae, Typhlocybinae) from China

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Abstract

In the present paper, a new species is added to the genus *Diomma* Motschulsky (Hemiptera: Cicadellidae: Typhlocybinae) from Southwest China, *D. pincersa* **sp. n.** At the same time, a key can distinguish all Chinese species of the genus is provided.

Keywords

Hemiptera, Auchenorrhyncha, new species, morphology, taxonomy, China

Introduction

The leafhopper genus *Diomma* was established by Motschulsky in 1863 (Dworakowska 1981; Chiang and Knight 1990). *Diomma* belongs to the tribe Erythroneurini (Typhlocybinae) with *Diomma ochracea* Motschulsky, 1863 as its type species. The genus consists of three subgenera: *Diomma* Motschulsky; *Bunyipia* Dworakowska and *Dilobonota* Dworakowska. So far, all species occurring in China belong to the subge-

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nus *Diomma*, which distributed only in Oriental region. A new species from Guizhou Province, China is described and illustrated. A key to Chinese species of *Diomma* is given. All specimens examined are deposited to the collection of the Insititute of Entomology, Guizhou University, Guiyang, China (GUGC).

Taxonomy

Diomma Motschulsky

Diomma Motschulsky 1863: 102

Type species: *Diomma ochracea* Motschulsky, 1863.

Description. Body yellow or brownish yellow, more or less flattened. Head almost equally broad as pronotum. Crown anterior margin produced medially. Pronotum with width greater than length. Vertex and pronotum usually ornamented with dark spots or stripes. Scutellum small, triangular; transverse impression distinct. Forewing apical veins free or 3rd apical cell stalked; 4th apical cell smallest. Hind venation reduced, submarginal vein poorly developed.

Abdominal apodemes long and narrow.

Pygofer large and broad, with numeous long setae at caudal margin and baso-ventral angle respectively. Subgenital plate extending beyond pygofer, with several microsetae on dorsal margin and with few of long macrosetae on outer surface. Pygofer dorsal appendage with distinct basal suture, but not movably articulated or immovably fused to margin, without basal suture. Central part of style very thick; preapical lobe prominant, sensory pits situated at preapical portion. Aedeagal shaft curved ventrally, usually with a obvious big process between preatrium and base of shaft. Gonopore terminal or subapical. Connective V- or Y-shaped; two lateral arms very long; central lobe absent or vestigial.

Distribution. Afrotropical region, Australian region, Oriental region.

Key to Chinese species (♂) of the genus *Diomma*

1 Aedeagus preatrium with a large preatrial process **2**

– Aedeagus preatrium without preatrial process (Fig. 18) ..... ***D. pulchra* (Matsumura, 1916)**

2 Gonopore apical **3**

– Gonopore subapical **5**

3 Aedeagal shaft with paired processes medially, which edges serrated (Fig. 19) ... ***D. taiwana* (Shiraki, 1912)**

– Aedeagal shaft without paired processes medially **4**

4 Apex of aedeagal shaft with a short, rigid process (Fig. 17) ..... ***D. knighti* Dworakowska, 1981**

– Apex of aedeagal shaft without short, rigid process (Fig. 16) .... ***D. katoi* Dworakowska, 1981**

5 Aedeagal shaft with wide and compressed processes in median, which lateral margin serrated (Figs 8, 9) ..... ***D. pincersa* sp. n.**

– Aedeagal shaft without process in median (Fig. 14).. ***D. ilsae* (Jacobi, 1941)**

***Diomma* (*Diomma*) *pincersa* Song, Li & Xiong, sp. n.**

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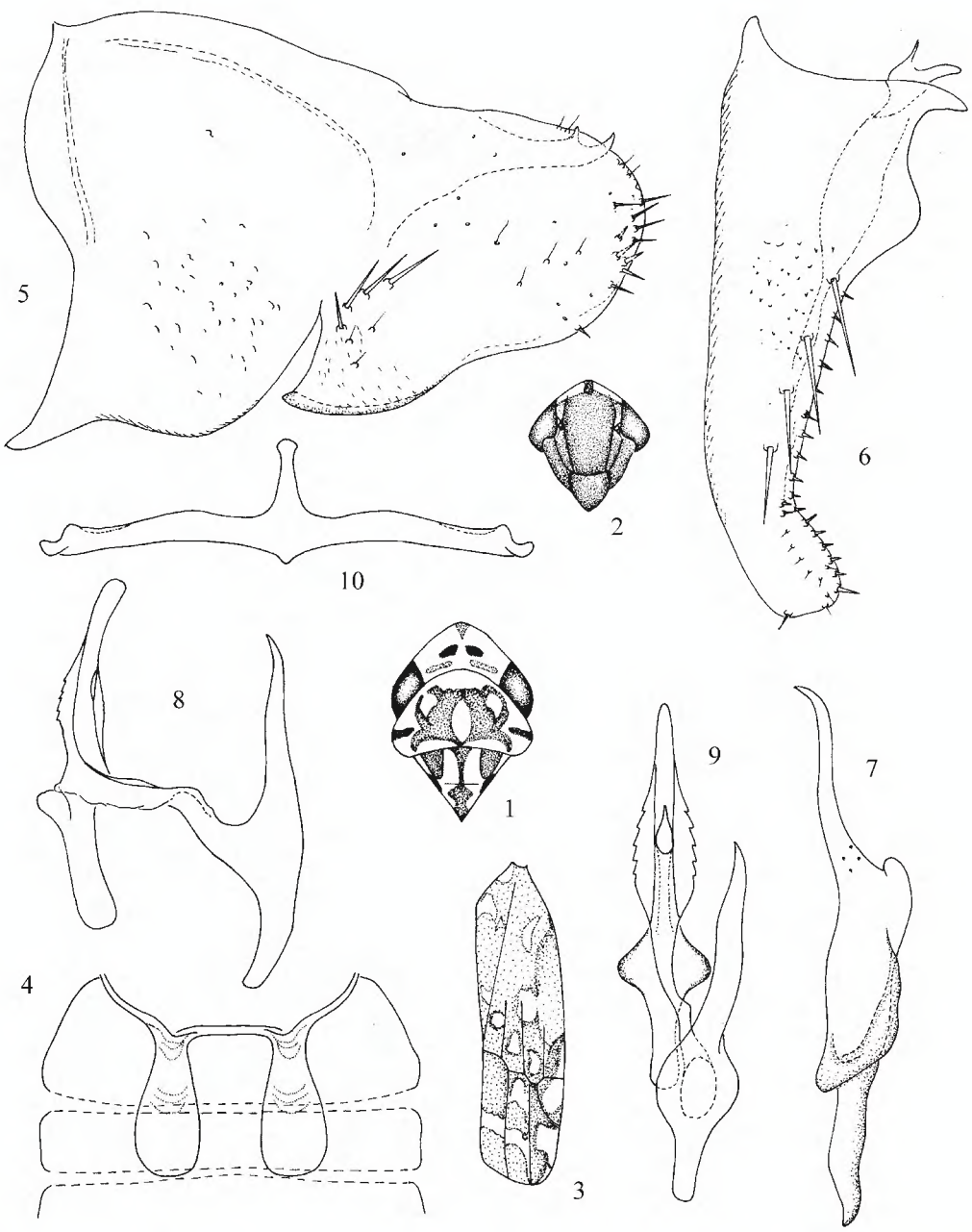
Figures 1–10

Description. Head (Fig. 1) width about equal in length to greast width of pronotum. Vertex (Fig. 1) yellow, with a large median apical spot, orange red and with four irregular spots: one pair near posterior margin of crown light brown; other pair smaller, blackish



Figures 1–10. *Diomma* (*D.*) *pincersa* Song, Li & Xiong, sp. n. **1** Head and thorax, dorsal view **2** Face **3** Fore wing **4** Abdominal apodemes **5** Pygofer lobe, lateral view **6** Subgenital plate **7** Style **8** Aedeagus, lateral view **9** Aedeagus, ventral view **10** Connective.

brwon. Eyes (Figs 1, 2) greyish black. Face (Fig. 2) brownish black, with a orange red spot at its upper part. Anteclypeus quite large and broad, little expanded, nearly pentagonal. Pronotum (Fig. 1) with large irregular nut-brown stripes. Scutellum (Fig. 1) small, triangular; basal triangles blackish brown, a longitudinal dark stripe extended from base to apex. Forewing wax field orange yellow, with several irregular markings as in Fig. 3.

Abdominal apodemes (Fig. 4) extended to posterior margin of 4th sternite.

Pygofer lobe (Fig. 5) broad, with few of long macrosetae on lateral surface. Pygofer dorsal appendage immovably fused to margin, its terminal part bifurcate. Subgenital plate (Fig. 6) long, much protruding beyond pygofer lobe, with four basal macrosetae and numerous short rigid setae along upper margin. Style (Fig. 7) broad in middle, long and slender at apical portion, with four sensory pits not far from preapical lobe. Preapical lobe small, but prominent. Aedeagal shaft (Figs 8, 9) curved ventrally, with serrated lateral margin in median; shaft elongated. Preatrium with a large process, its length about as long as that of dorsal apodeme. Gonopore subapical, ventrad. Connective (Fig. 10) Y-shaped, two lateral arms very long, which more than two times of connective stem length; central lobe small, quite vestigial.

Measurement. Body length males 2.8 mm.

Type material. *Holotype*, male, China: Guizhou Province, Qianxi County, 15~17 October 2007, coll. QIONG-ZHANG SONG. *Paratype*: one male, same date as holotype.

Remarks. The new species can be distinguished from other species of the genus by its unique aedeagus's structure (Figs 8, 9).

Etymology. The specific name is derived from the Latin word "pincersa" (claw, clamp), which refers to the pygofer dorsal appendage with terminal part branched or bifurcate (Fig. 5).

Diomma (*Diomma*) *ilsae* (Jacobi, 1941), rec. n.

Figures 11–15

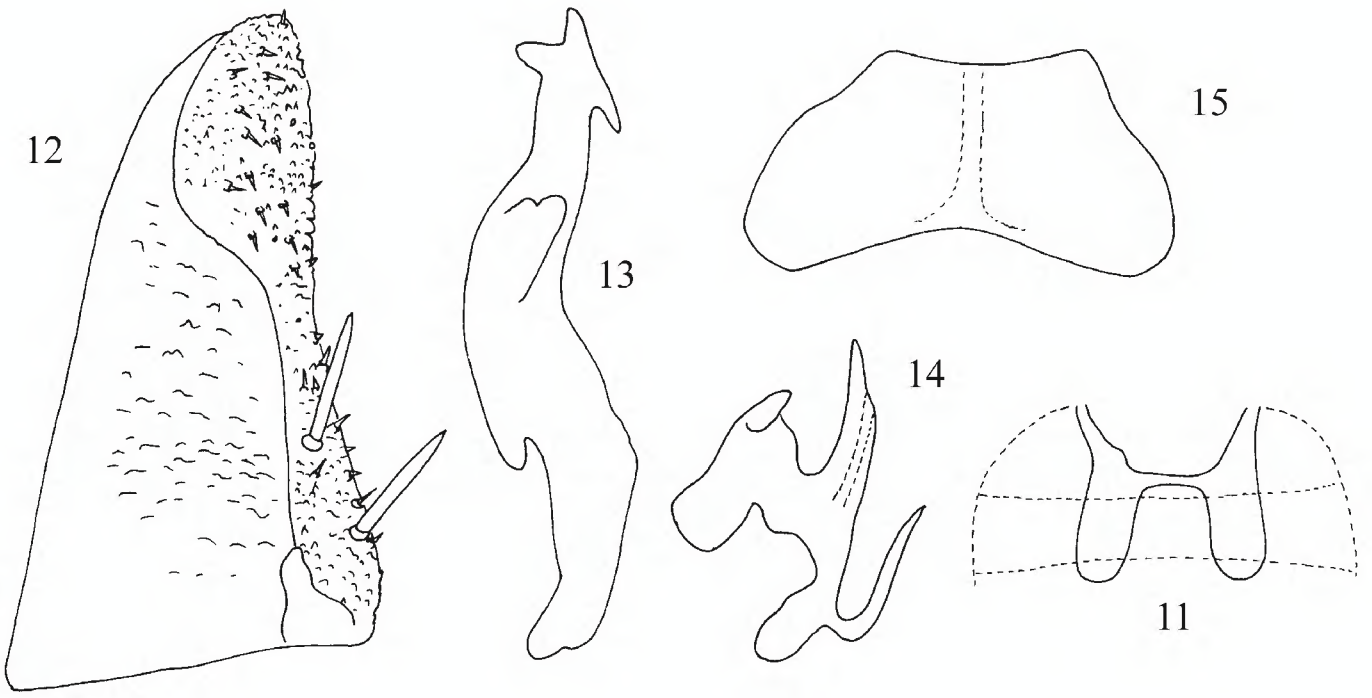
Typhlocyba ilsae Jacobi 1941
Zyginoides ilsae Dworakowska 1972: 860
Diomma ilsae Dworakowska 1981: 364

Type material. six males, six females, China: Yunnan Province, Mengla County, 18 July 2008, coll. Yuehua Song; one female, China: Yunnan Province, Menghai County, 24 July 2008, coll. Yuehua Song.

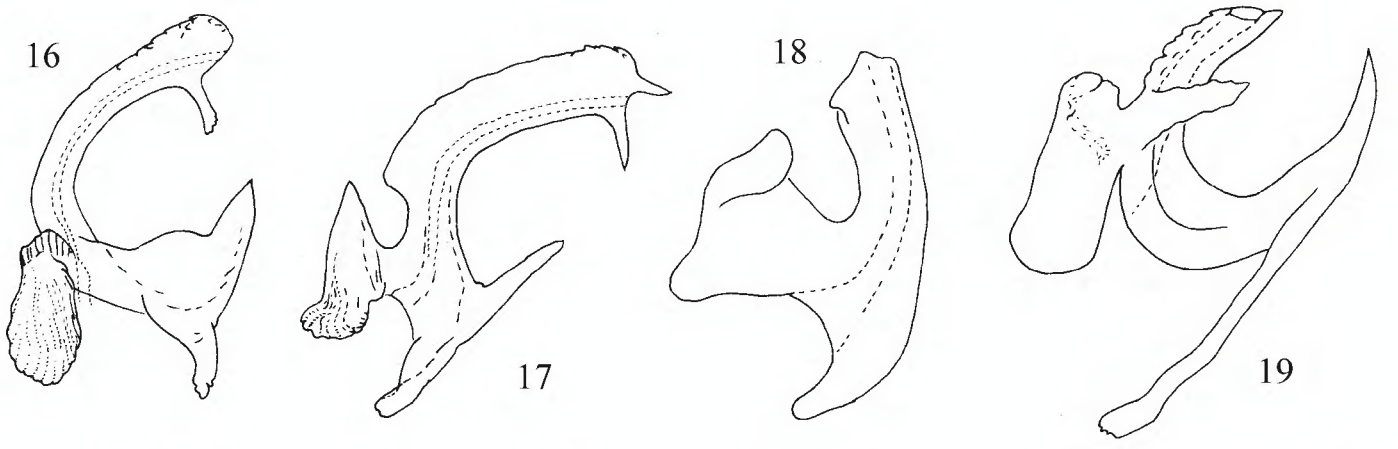
Distribution. Sunda; China (Yunnan).

Species checklist of *Diomma* from China

Diomma (*D.*) *ilsae* (Jacobi 1941), rec. n.
Typhlocyba ilsae Jacobi 1941



Figures 11–15. *Diomma* (*D.*) *ilsae* Jacobi, 1941, rec. n. (after Dworakowska, 1972) **11** Abdominal apodemes **12** Subgenital plate **13** Style **14** Aedeagus, lateral view **15** Connective.



Figures 16–19. Aedeagus, lateral view of *Diomma* species. **16** *Diomma* (*D.*) *katoi* Dworakowska, 1981 **17** *Diomma* (*D.*) *knighti* Dworakowska, 1981 **18** *Diomma* (*D.*) *pulchra* (Matsumura, 1916) **19** *Diomma* (*D.*) *taiwana* (Shiraki, 1912) (all figures after Dworakowska, 1972; 1981).

Zyginoides ilsae Dworakowska 1972
Diomma ilsae Dworakowska 1981
Distribution: China (Yunnan: Mengla, Menghai); Sunda
Diomma (*D.*) *katoi* Dworakowska 1981
Distribution: China (Taiwan: Taipei; Guizhou: Rongjiang)
Diomma (*D.*) *knighti* Dworakowska 1981
Distribution: China (Taiwan: Chiayi; Guizhou: Bijie)
Diomma (*D.*) *pincersa* Song, Li & Xiong, sp. n.
Distribution: China (Guizhou: Qianxi)
Diomma (*D.*) *pulchra* (Matsumura 1916)
Motschulskia pulchra Matsumura 1916

Platytettix pulchrus Matsumura 1932
Zyginoides (*Platytetticis*) *pulchra* Dworakowska 1972
Diomma pulchra Dworakowska 1981
Distribution: China (Taiwan: Taichung; Guizhou: Guiyang, Yanhe); Japan
Diomma (*D.*) *taiwana* (Shiraki 1912)
Eupteryx taiwanus Shiraki 1912
Zygina bokotonis Matsumura 1932
Pakeasta notata Ahmed 1971
Diomma taiwana Dworakowska 1981
Distribution: China (Taiwan: Taipei, Chiayi; Guizhou: Luodian, Xingyi; Yunnan: Pu'er; Hainan: Haikou); Japan; India

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